Claims:

1. A method for down converting a Radio Frequency (RF) information signal to a baseband information signal, the method comprising:

receiving the RF information signal;

down converting the RF information signal to produce a Very Low Intermediate Frequency (VLIF) information signal at a VLIF and having a DC offset;

band pass filtering the VLIF information signal;

producing a DC offset indication for the VLIF information signal;

generating a DC offset correction based upon the DC offset indication, the DC offset correction having a DC offset correction component; and

subtracting the DC offset correction from the VLIF information signal to substantially remove a DC offset from the post-filtered VLIF information signal; and

down converting the VLIF information signal to produce a baseband information signal.

2. The method of claim 1, wherein the VLIF is approximately 100 kHz.

3. The method of claim 1, wherein the DC offset of the VLIF information signal is introduced by at least one of amplification operations, filtering operations, and down conversion operations.

4. The method of claim 1, wherein the DC offset indication is produced by averaging the DC offset of the VLIF information signal across a full RF burst.

5. The method of claim 4, wherein the full RF burst carries a portion of one of a GPRS data packet or an EDGE data packet.

6. The method of claim 4, wherein the full RF burst is digitally modulated according to an 8-PSK constellation.

7. The method of claim 4, wherein the full RF burst is digitally modulated according to a GMSK constellation.

8. The method of claim 1, further comprising converting the VLIF information signal from an analog signal to a digital signal.

9. The method of claim 8, wherein band pass filtering the VLIF information signal, producing the DC offset indication, generating the DC offset correction, subtracting the DC offset correction, and down converting the VLIF information signal are performed using digital processing operations.

10. The method of claim 8, wherein down converting the RF information signal is performed in an analog operation.

11. A method for down converting a Radio Frequency (RF) information signal to a baseband information signal, the method comprising:

receiving the RF information signal;

in an analog operation, down converting the RF information signal to produce a Very Low Intermediate Frequency (VLIF) information signal at a VLIF and having a DC offset;

converting the VLIF information signal from an analog signal to a digital signal;

in a digital operation, band pass filtering the VLIF information signal;

in a digital operation, producing a DC offset indication for the VLIF information signal;

in a digital operation, generating a DC offset correction based upon the DC offset indication, the DC offset correction having a DC offset correction component;

in a digital operation, subtracting the DC offset correction from the VLIF information signal to substantially remove a DC offset from the post-filtered VLIF information signal; and

in a digital operation, down converting the VLIF information signal to produce a baseband information signal.

12. The method of claim 11, wherein the VLIF is approximately 100 kHz.

13. The method of claim 11, wherein the DC offset of the VLIF information signal is introduced by at least one of amplification operations, filtering operations, and down conversion operations.

14. The method of claim 11, wherein the DC offset indication is produced by averaging the DC offset of the VLIF information signal across a full RF burst.

15. The method of claim 14, wherein the full RF burst carries a portion of one of a GPRS data packet or an EDGE data packet.

16. The method of claim 14, wherein the full RF burst is digitally modulated according to an 8-PSK constellation.

17. The method of claim 14, wherein the full RF burst is digitally modulated according to a GMSK constellation.

18. A wireless receiver for down converting a Radio Frequency (RF) information signal to a baseband information signal, the wireless receiver comprising:

a local oscillator operable to produce a local oscillation;

a mixer operable to mix the RF information signal with the local oscillation to down convert the RF information signal to produce a Very Low Intermediate Frequency (VLIF) information signal at a VLIF and having a DC offset;

a band pass filter operable to band pass filter the VLIF information signal;

a DC offset determination module operable to produce a DC offset indication for the VLIF information signal;

a DC offset correction module operable to generate a DC offset correction based upon the DC offset indication;

a subtraction module operable to subtract the DC offset correction from the VLIF information signal to substantially remove a DC offset of the post-filtered VLIF information signal; and

a down converter operable to down convert the VLIF information signal to a baseband information signal.

19. The wireless receiver of claim 18, wherein the VLIF is approximately 100 kHz.

20. The wireless receiver of claim 18, wherein the DC offset of the VLIF information signal is introduced by at least one of an amplifier, a filter, and the mixer.

21. The wireless receiver of claim 18, wherein the DC offset determination module

produces the DC offset indication by averaging the DC offset of the VLIF information signal across a full RF burst.

22. The wireless receiver of claim 21, wherein the full RF burst carries a portion of one of a GPRS data packet or an EDGE data packet.

23. The wireless receiver of claim 21, wherein the full RF burst is digitally modulated according to an 8-PSK constellation.

24. The wireless receiver of claim 21, wherein the full RF burst is digitally modulated according to a GMSK constellation.

25. The wireless receiver of claim 18, further comprising an Analog to Digital Converter (ADC) operable to convert the VLIF information signal from an analog signal to a digital signal.

26. The wireless receiver of claim 18, further comprising an analog to digital converter that converts the VLIF information signal from an analog signal to a digital signal.

27. The wireless receiver of claim 26, wherein:

the local oscillator and the mixer reside within a RF front end; and

the band pass filter, the DC offset determination module, the DC offset correction module, the subtraction module, and the down converter are implemented by a baseband

processor.

28. A method for down converting a Radio Frequency (RF) information signal to a baseband information signal, the method comprising:

receiving the RF information signal;

down converting the RF information signal to produce a Very Low Intermediate Frequency (VLIF) information signal at a VLIF and having a DC offset;

down converting the VLIF information signal to produce a baseband information signal having a DC offset component at -VLIF frequency;

low pass filtering the baseband information signal;

producing a DC offset indication for the baseband information signal;

generating a DC offset correction based upon the DC offset indication, the DC offset correction having a DC offset correction component; and

subtracting the DC offset correction at -VLIF frequency from the baseband information signal to substantially remove the DC offset component at -VLIF frequency from the baseband information signal.

29. The method of claim 28, wherein the VLIF is approximately 100 kHz.

30. The method of claim 29, wherein the DC offset of the VLIF information signal is introduced by at least one of amplification operations, filtering operations, and down conversion operations.

31. The method of claim 28, wherein the DC offset indication is produced by correlating a VLIF tone with the baseband information signal across a full RF burst.

32. A method for down converting a Radio Frequency (RF) information signal to a baseband information signal, the method comprising:

receiving the RF information signal;

in an analog operation, down converting the RF information signal to produce a Very Low Intermediate Frequency (VLIF) information signal at a VLIF and having a DC offset;

in an analog operation, down converting the VLIF information signal to produce a baseband information signal having a DC offset component at -VLIF frequency;

converting the baseband information signal from an analog signal to a digital signal;

in a digital operation, low pass filtering the baseband information signal;

in a digital operation, producing a DC offset indication for the baseband information signal;

in a digital operation, generating a DC offset correction based upon the DC offset indication, the DC offset correction having a DC offset correction component; and

in a digital operation, subtracting the DC offset correction at -VLIF frequency from the baseband information signal to substantially remove the DC offset component at -VLIF frequency from the baseband information signal.

33. The method of claim 32, wherein the VLIF is approximately 100 kHz.

34. The method of claim 32, wherein the DC offset indication is produced by

averaging the DC offset of the VLIF information signal across a full RF burst.

35. The method of claim 34, wherein the full RF burst carries a portion of one of a GPRS data packet or an EDGE data packet.

36. The method of claim 34, wherein the full RF burst is digitally modulated according to an 8-PSK constellation.

37. The method of claim 34, wherein the full RF burst is digitally modulated according to a GMSK constellation.

38. A wireless receiver for down converting a Radio Frequency (RF) information signal to a baseband information signal, the wireless receiver comprising:

a local oscillator operable to produce a first local oscillation and a second local oscillation;

a first mixer operable to mix the RF information signal with the first local oscillation to down convert the RF information signal to produce a Very Low Intermediate Frequency (VLIF) information signal at a VLIF and having a DC offset;

a second mixer operable to mix the RF information signal with the second local oscillation to down convert the VLIF information signal to produce a baseband information signal having a DC offset component at -VLIF frequency;

a low pass filter operable to low pass filter the baseband information signal;

a DC offset determination module operable to produce a DC offset indication for the

baseband information signal;

a DC offset correction module operable to generate a DC offset correction at -VLIF frequency based upon the DC offset indication; and

a subtraction module operable to subtract the DC offset correction from the baseband information signal to substantially remove a DC offset component at -VLIF frequency from the baseband information signal.

39. The wireless receiver of claim 38, wherein the VLIF is approximately 100 kHz.

40. The wireless receiver of claim 38, wherein the DC offset of the VLIF information signal is introduced by at least one of an amplifier, a filter, and the mixer.